

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2002-NE-05-AD; Amendment 39-12684; AD 2002-06-07]**

**RIN 2120-AA64**

### **Airworthiness Directives; General Electric Company CF6-80E1 Series Turbofan Engines**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

-----

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to General Electric Company (GE) CF6-80E1 series turbofan engines, installed on Airbus Industrie A330 series airplanes. This action requires initial and repetitive pressure testing of the directional pilot valve (DPV) assembly, with replacement of DPV assemblies that fail the pressure test, or, replacing the DPV assembly without performing pressure testing, with a serviceable DPV assembly, or, deactivating the fan reverser for no longer than 10 days until replacement of the DPV assembly is done. This amendment is prompted by a review of thrust reverser safety analyses following a report of inadvertent thrust reverser deployment on another make and model engine. The actions specified in this AD are intended to prevent inadvertent thrust reverser deployment, which, if it occurred in-flight, could result in loss of control of the airplane.

**DATES:** Effective May 1, 2002. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of May 1, 2002.

Comments for inclusion in the Rules Docket must be received on or before May 28, 2002.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-NE-05-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: "[9-ane-adcomment@faa.gov](mailto:9-ane-adcomment@faa.gov)". Comments sent via the Internet must contain the docket number in the subject line.

The service information referenced in this AD may be obtained from Middle River Aircraft Systems, Mail Point 46, 103 Chesapeake Park Plaza, Baltimore, MD, 21220-4295, attn: Warranty Support, telephone: (410) 682-0094, fax: (410) 682-0100. This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Karen Curtis, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7192; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** The FAA received a report of inadvertent thrust reverser deployment on a Pratt & Whitney powered Airbus Industrie A300-600 series airplane. Following that event, the FAA reviewed thrust reverser safety analyses on other make and model engines, including GE CF6-80E1 series turbofan engines that are used on Airbus Industrie A330 series airplanes. A review of thrust reverser actuation system (TRAS) shop findings and component failure rate data, test data, and system safety analyses revealed that a hidden failure mode involving the directional pilot valve (DPV) assembly exists. The DPV assembly controls the direction of the operation of the center drive unit when the TRAS is activated. If high pressure downstream of the pressure regulating and shutoff valve (PRSOV) exists in combination with a leaking DPV assembly, an inadvertent deployment could occur. High pressure downstream of the PRSOV can be caused by auto-restow of the thrust reverser, PRSOV open failures, or significant PRSOV leakage. PRSOV open failures and significant PRSOV leakage are detected by the DPV assembly pressure switch. DPV assembly open failures and significant DPV assembly leakage are detected by the inability to stow the reverser. However, there exists a range of DPV assembly leakage rates from a closed DPV assembly which are not detectable during normal operation.

This undetectable failure mode of the DPV assembly, concurrent with high pressure downstream of the PRSOV, can result in an inadvertent thrust reverser deployment. This condition, if not corrected, could result in inadvertent thrust reverser deployment, which, if it occurred in-flight, could result in loss of control of the airplane.

#### **Manufacturer's Service Information**

The FAA has reviewed and approved the technical contents of Middle River Aircraft Systems CF6-80E1 Alert Service Bulletin (ASB) No. 78A5053, dated October 30, 2001, that describes procedures for thrust reverser inspections and checks, and DPV assembly replacement.

#### **FAA's Determination of an Unsafe Condition and Required Actions**

Although none of these affected engine models are used on any airplanes that are registered in the United States, the possibility exists that the engine models could be used on airplanes that are registered in the United States in the future. Since an unsafe condition has been identified that is likely to exist or develop on other GE CF6-80E1 series turbofan engines of the same type design, installed on Airbus Industrie A330 series airplanes, this AD is being issued to prevent inadvertent thrust reverser deployment, which, if it occurred in-flight, could result in loss of control of the airplane. This AD requires:

- Initial and repetitive pressure testing of the DPV assembly, with replacement of DPV assemblies that fail the pressure test, or
- Replacing the DPV assembly without performing pressure testing, with a serviceable DPV assembly, or

- Deactivating the fan reverser for no longer than 10 days until replacement of the DPV assembly is done.

The actions are required to be done in accordance with the service bulletin described previously.

### **Immediate Adoption of This AD**

Since there are currently no domestic operators of this engine model, notice and opportunity for prior public comment are unnecessary. Therefore, a situation exists that allows the immediate adoption of this regulation.

### **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NE-05-AD." The postcard will be date stamped and returned to the commenter.

### **Regulatory Analysis**

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39--AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **Sec. 39.13 [Amended]**

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "[www.airweb.faa.gov/rgl](http://www.airweb.faa.gov/rgl)"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2002-06-07 General Electric Company:** Amendment 39-12684. Docket No. 2002-NE-05-AD.

## Applicability

This airworthiness directive (AD) is applicable to General Electric Company (GE) CF6-80E1 series turbofan engines that are installed on Airbus Industrie A330 series airplanes.

**Note 1:** This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

## Compliance

Compliance with this AD is required as indicated, unless already done.

To prevent inadvertent thrust reverser deployment, which, if it occurred in-flight, could result in loss of control of the airplane, do the following:

(a) Perform one of the following, in accordance with paragraphs 2.B. and 2.C. of the Accomplishment Instructions of Middle River Aircraft Systems Alert Service Bulletin (ASB) No. 78A5053, dated October 30, 2001, before exceeding 7,000 flight hours time-since-new (TSN) or 1,000 flight hours time-in-service (TIS) after the effective date of this AD:

(1) Perform a directional pilot valve (DPV) assembly pressure check for leakage, and, if necessary, do one of the following:

(i) Replace the DPV assembly with a serviceable assembly, and then perform a system test of the thrust reverser, or

(ii) Deactivate the thrust reverser. However, the DPV assembly must be replaced with a serviceable assembly, and a system test of the thrust reverser performed within 10 days after deactivation.

(2) Replace the DPV assembly with a serviceable assembly, and then perform a system test of the thrust reverser.

(b) Thereafter, at intervals not to exceed 7,000 flight hours TIS since the last check or replacement of the DPV assembly, perform one of the following, in accordance with paragraphs 2.B and 2.C. of the Accomplishment Instructions of Middle River Aircraft Systems ASB No. 78A5053, dated October 30, 2001:

- (1) Perform a DPV assembly pressure check for leakage, and, if necessary, either:
  - (i) Replace the DPV assembly with a serviceable assembly and then perform a system test of the thrust reverser, or
  - (ii) Deactivate the thrust reverser. However, the DPV assembly must be replaced with a serviceable assembly, and a system test of the thrust reverser performed within 10 days after deactivation.
- (2) Replace the DPV assembly with a serviceable assembly and then perform a system test of the thrust reverser.

### **Definition of Serviceable DPV Assembly**

(c) For the purpose of this AD, a serviceable DPV assembly is an assembly that has either accumulated zero TSN, or has accumulated zero TIS after having passed the tests in the Middle River Aircraft Systems Component Maintenance Manual GEK 85007 (78-31-51), Directional Pilot Solenoid Valve, Page Block 101, Testing and Troubleshooting, or has been successfully leak checked in accordance with paragraph 2.B. of the Accomplishment Instructions of Middle River Aircraft Systems ASB No. 78A5053, dated October 30, 2001.

### **Alternative Methods of Compliance**

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.

### **Special Flight Permits**

(e) Special flight permits may be issued in accordance with Secs. 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

### **Incorporation by Reference**

(f) The actions required by this AD must be done in accordance with Middle River Aircraft Systems CF6-80E1 Alert Service Bulletin (ASB) No. 78A5053, dated October 30, 2001.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Middle River Aircraft Systems, Mail Point 46, 103 Chesapeake Park Plaza, Baltimore, MD, 21220-4295, attn: Warranty Support, telephone: (410) 682-0094, fax: (410) 682-0100. Copies may be inspected, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capital Street, NW., suite 700, Washington, DC.

**Effective Date**

(g) This amendment becomes effective on May 1, 2002.

Issued in Burlington, Massachusetts, on March 14, 2002.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 02-6912 Filed 3-26-02; 8:45 am]

BILLING CODE 4910-13-P